

101 806 875

cofe



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Re application of: Andrei et al.

Attorney Docket No.: IMECP019

Issued: February 28, 2006

Patent: 7,005,852 B2

Title: DISPLAYS WITH ALL-METAL
ELECTRONICS

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the U.S. Postal Service with sufficient postage as first-class mail on October 26, 2007 in an envelope addressed to the Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450.

Signed: _____

Juan D. Petris

**REQUEST FOR CERTIFICATE OF CORRECTION
OF OFFICE MISTAKE**

(35 U.S.C. §254, 37 CFR §1.322)

**Certificate
NOV 01 2007
of Correction**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450
Attn: Certificate of Correction

Dear Sir:

Attached is Form PTO-1050 (Certificate of Correction) at least one copy of which is suitable for printing. The errors together with the exact page and line number where the errors are shown correctly in the application file are as follows:

CLAIMS:

In Column 44, please add the following claims after claim 31:

--32. A liquid crystal display (LCD) device, comprising:

a display panel having a front substrate, a back substrate, a layer of liquid crystals between the front and back substrates, and an electrode layer for applying electric fields to the

NOV 1 2007

NOV 1 2007

NOV 1 2007

layer of liquid crystals, the liquid crystals and the electrode layer defining a plurality of basic visible elements;

all-metal electronics formed on the back substrate of the display panel, the all metal-electronics comprising control switches for directly controlling operation of the basic visible elements, digital-to-analog converters (DACs) for converting image data to control the control switches, frame memory for storing the image data, and selection circuitry for enabling individual ones of the basic visible elements. -- This appears correctly in the Amendment After Allowance, Before Payment of Issue Fee as filed on August 5, 2005, page 6, paragraph 7, as claim 28.

--33. The LCD device of claim 32 wherein the control switches and the DACs are implemented with transpinnors, each transpinnor comprising a network of multi-layer thin-film elements, at least one thin-film element in the transpinnor exhibiting giant magnetoresistance, the transpinnor further comprising a conductor magnetically coupled to the at least one thin-film element for controlling operation of the transpinnor, wherein the transpinnor is operable to generate an output signal which is a function of a resistive imbalance among the thin-film elements and which is substantially proportional to a power current in the network of thin-film elements.-- This appears correctly in the Amendment After Allowance, Before Payment of Issue Fee as filed on August 5, 2005, page 7, paragraph 2, as claim 29.

--34. The LCD device of claim 33 wherein the frame memory comprises a plurality of blocks of all-metal memory, at least one of the blocks of memory being associated with each of the basic visible elements and being operable to store the image data therefor. -- This appears correctly in the Amendment After Allowance, Before Payment of Issue Fee as filed on August 5, 2005, page 7, paragraph 3, as claim 30.

NOV 1 2007

--35. The LCD device of claim 34 wherein each basic visible element comprises a pixel having a plurality of subpixels, each subpixel corresponding to and being controlled by one of the control switches, one of the DACs, and one of the blocks of memory. -- This appears correctly in the Amendment After Allowance, Before Payment of Issue Fee as filed on August 5, 2005, page 7, paragraph 4, as claim 31.

--36. The LCD device of claim 35 wherein each of the memory blocks is operable to store at least one bit of the image data.-- This appears correctly in the Amendment After Allowance, Before Payment of Issue Fee as filed on August 5, 2005, page 7, paragraph 5, as claim 32.

--37. The LCD device of claim 34 wherein the control switches, the DACs, and the memory blocks are arranged in a plurality of stacked levels of the all-metal electronics. -- This appears correctly in the Amendment After Allowance, Before Payment of Issue Fee as filed on August 5, 2005, page 8, paragraph 1, as claim 33.

--38. The LCD device of claim 37 wherein the control switches, the DACs, and the memory blocks associated with each basic visible element comprises one of a plurality of interchangeable circuit modules. -- This appears correctly in the Amendment After Allowance, Before Payment of Issue Fee as filed on August 5, 2005, page 8, paragraph 2, as claim 34.

--39. The LCD device of claim 32 wherein the frame memory comprises a plurality of memory cells, each memory cell comprising a multi-layer structure exhibiting

NOV 1 2007

NOV 1 2007

NOV 1 2007

magnetoresistance. -- This appears correctly in the Amendment After Allowance, Before Payment of Issue Fee as filed on August 5, 2005, page 8, paragraph 3, as claim 35.

--40. The LCD device of claim 39 wherein each multi-layer structure comprises:
a plurality of magnetic layers, at least one of the magnetic layers being for magnetically storing one bit of information; and

a plurality of the access lines integrated with the plurality of magnetic layers and configured such that the bit of information may be accessed using selected ones of the plurality of access lines and the giant magnetoresistive effect;

wherein the magnetic layers are part of a substantially closed flux structure. -- This appears correctly in the Amendment After Allowance, Before Payment of Issue Fee as filed on August 5, 2005, page 8, paragraph 4, as claim 36.

--41. The LCD device of claim 32 wherein the selection circuitry comprises a plurality of transpinnors, each transpinnor comprising a network of multi-layer thin-film elements, at least one thin-film element in the transpinnor exhibiting giant magnetoresistance, the transpinnor further comprising a conductor magnetically coupled to the at least one thin-film element for controlling operation of the transpinnor, wherein the transpinnor is operable to generate an output signal which is a function of a resistive imbalance among the thin-film elements and which is substantially proportional to a power current in the network of thin-film elements.--
This appears correctly in the Amendment After Allowance, Before Payment of Issue Fee as filed on August 5, 2005, page 8, paragraph 5, as claim 37.

--42. The LCD device of claim 41 wherein first ones of the transpinnors are configured as drivers, and second ones of the transpinnors are configured as logic gates which are operable

NOV 1 2007

NOV 1 2007
NOV 1 2007

as selection logic. -- This appears correctly in the Amendment After Allowance, Before Payment of Issue Fee as filed on August 5, 2005, page 9, paragraph 2, as claim 38.

--43. A light-emitting diode (LED) display device, comprising:
a display panel having a substrate and a plurality of LEDs on the substrate defining a plurality of basic visible elements; and
all-metal electronics formed on the substrate of the display panel, the all metal-electronics comprising control switches for directly controlling operation of the basic visible elements, digital-to-analog converters (DACs) for converting image data to control the control switches, frame memory for storing the image data, and selection circuitry for enabling individual ones of the basic visible elements. -- This appears correctly in the Amendment After Allowance, Before Payment of Issue Fee as filed on August 5, 2005, page 9, paragraph 3 as claim 39.

--44. The LED display device of claim 43 wherein the control switches and the DACs are implemented with transpinnors, each transpinnor comprising a network of multi-layer thin-film elements, at least one thin-film element in the transpinnor exhibiting giant magnetoresistance, the transpinnor further comprising a conductor magnetically coupled to the at least one thin-film element for controlling operation of the transpinnor, wherein the transpinnor is operable to generate an output signal which is a function of a resistive imbalance among the thin-film elements and which is substantially proportional to a power current in the network of thin-film elements.-- This appears correctly in the Amendment After Allowance, Before Payment of Issue Fee as filed on August 5, 2005, page 9, paragraph 4 as claim 40. NOV 1 2007

NOV 1 2007

NOV 1 2007

--45. The LED display device of claim 44 wherein the frame memory comprises a plurality of blocks of all-metal memory, at least one of the blocks of memory being associated with each of the basic visible elements and being operable to store the image data therefor. --
This appears correctly in the Amendment After Allowance, Before Payment of Issue Fee as filed on August 5, 2005, page 10, paragraph 2 as claim 41.

--46. The LED display device of claim 45 wherein each basic visible element comprises a pixel having a plurality of subpixels, each subpixel corresponding to and being controlled by one of the control switches, one of the DACs, and one of the blocks of memory. --
This appears correctly in the Amendment After Allowance, Before Payment of Issue Fee as filed on August 5, 2005, page 10, paragraph 3 as claim 42.

--47. The LED display device of claim 46 wherein each of the memory blocks is operable to store at least one bit of the image data.-- This appears correctly in the Amendment After Allowance, Before Payment of Issue Fee as filed on August 5, 2005, page 10, paragraph 4 as claim 43.

--48. The LED display device of claim 45 wherein the control switches, the DACs, and the memory blocks are arranged in a plurality of stacked levels of the all-metal electronics.--
This appears correctly in the Amendment After Allowance, Before Payment of Issue Fee as filed on August 5, 2005, page 10, paragraph 5 as claim 44.

--49. The LED display device of claim 48 wherein the control switches, the DACs, and the memory blocks associated with each basic visible element comprises one of a plurality of

NOV 1 2007

NOV 1 2007

interchangeable circuit modules. -- This appears correctly in the Amendment After Allowance, Before Payment of Issue Fee as filed on August 5, 2005, page 10, paragraph 6 as claim 45.

--50. The LED display device of claim 43 wherein the frame memory comprises a plurality of memory cells, each memory cell comprising a multi-layer structure exhibiting magnetoresistance. -- This appears correctly in the Amendment After Allowance, Before Payment of Issue Fee as filed on August 5, 2005, page 11, paragraph 1 as claim 46.

--51. The LED display device of claim 50 wherein each multi-layer structure comprises:

a plurality of magnetic layers, at least one of the magnetic layers being for magnetically storing one bit of information; and

a plurality of the access lines integrated with the plurality of magnetic layers and configured such that the bit of information may be accessed using selected ones of the plurality of access lines and the giant magnetoresistive effect;

wherein the magnetic layers are part of a substantially closed flux structure.-- This appears correctly in the Amendment After Allowance, Before Payment of Issue Fee as filed on August 5, 2005, page 11, paragraph 2 as claim 47.

--52. The LED display device of claim 43 wherein the selection circuitry comprises a plurality of transpinnors, each transpinnor comprising a network of multi-layer thin-film elements, at least one thin-film element in the transpinnor exhibiting giant magnetoresistance, the transpinnor further comprising a conductor magnetically coupled to the at least one thin-film element for controlling operation of the transpinnor, wherein the transpinnor is operable to generate an output signal which is a function of a resistive imbalance among the thin-film

NOV 1 2007
NOV 1 2007

elements and which is substantially proportional to a power current in the network of thin-film elements.-- This appears correctly in the Amendment After Allowance, Before Payment of Issue Fee as filed on August 5, 2005, page 11, paragraph 3 as claim 48.

--53. The LED display device of claim 52 wherein first ones of the transpinnors are configured as drivers, and second ones of the transpinnors are configured as logic gates which are operable as selection logic.-- This appears correctly in the Amendment After Allowance, Before Payment of Issue Fee as filed on August 5, 2005, page 11, paragraph 4 as claim 49.

--54. A plasma display device, comprising:
a plasma display panel having a substrate, the display panel defining a plurality of basic visible elements;

all-metal electronics formed on the substrate of the display panel, the all metal-electronics comprising control switches for directly controlling operation of the basic visible elements, digital-to-analog converters (DACs) for converting image data to control the control switches, frame memory for storing the image data, and selection circuitry for enabling individual ones of the basic visible elements.-- This appears correctly in the Amendment After Allowance, Before Payment of Issue Fee as filed on August 5, 2005, page 12, paragraph 1 as claim 50.

--55. The plasma display device of claim 54 wherein the control switches and the DACs are implemented with transpinnors, each transpinnor comprising a network of multi-layer thin-film elements, at least one thin-film element in the transpinnor exhibiting giant magnetoresistance, the transpinnor further comprising a conductor magnetically coupled to the at least one thin-film element for controlling operation of the transpinnor, wherein the transpinnor

NOV 1 2007

NOV 1 2007

is operable to generate an output signal which is a function of a resistive imbalance among the thin-film elements and which is substantially proportional to a power current in the network of thin-film elements. -- This appears correctly in the Amendment After Allowance, Before Payment of Issue Fee as filed on August 5, 2005, page 12, paragraph 2 as claim 51.

--56. The plasma display device of claim 55 wherein the frame memory comprises a plurality of blocks of all-metal memory, at least one of the blocks of memory being associated with each of the basic visible elements and being operable to store the image data therefor.-- This appears correctly in the Amendment After Allowance, Before Payment of Issue Fee as filed on August 5, 2005, page 12, paragraph 3 as claim 52.

--57. The plasma display device of claim 56 wherein each basic visible element comprises a pixel having a plurality of subpixels, each subpixel corresponding to and being controlled by one of the control switches, one of the DACs, and one of the blocks of memory. -- This appears correctly in the Amendment After Allowance, Before Payment of Issue Fee as filed on August 5, 2005, page 13, paragraph 1 as claim 53.

--58. The plasma display device of claim 57 wherein each of the memory blocks is operable to store at least one bit of the image data.-- This appears correctly in the Amendment After Allowance, Before Payment of Issue Fee as filed on August 5, 2005, page 13, paragraph 2 as claim 54.

--59. The plasma display device of claim 56 wherein the control switches, the DACs, and the memory blocks are arranged in a plurality of stacked levels of the all-metal electronics. --

NOV 1 2007

NOV 1 2007

This appears correctly in the Amendment After Allowance, Before Payment of Issue Fee as filed on August 5, 2005, page 13, paragraph 3 as claim 55.

--60. The plasma display device of claim 59 wherein the control switches, the DACs, and the memory blocks associated with each basic visible element comprises one of a plurality of interchangeable circuit modules. -- This appears correctly in the Amendment After Allowance, Before Payment of Issue Fee as filed on August 5, 2005, page 13, paragraph 4 as claim 56.

--61. The plasma display device of claim 54 wherein the frame memory comprises a plurality of memory cells, each memory cell comprising a multi-layer structure exhibiting magnetoresistance. -- This appears correctly in the Amendment After Allowance, Before Payment of Issue Fee as filed on August 5, 2005, page 13, paragraph 5 as claim 57.

--62. The plasma display device of claim 61 wherein each multi-layer structure comprises:

a plurality of magnetic layers, at least one of the magnetic layers being for magnetically storing one bit of information; and

a plurality of the access lines integrated with the plurality of magnetic layers and configured such that the bit of information may be accessed using selected ones of the plurality of access lines and the giant magnetoresistive effect;

wherein the magnetic layers are part of a substantially closed flux structure.-- This appears correctly in the Amendment After Allowance, Before Payment of Issue Fee as filed on August 5, 2005, page 13, paragraph 6 as claim 58.

NOV 1 2007

--63. The plasma display device of claim 54 wherein the selection circuitry comprises a plurality of transpinnors, each transpinnor comprising a network of multi-layer thin-film elements, at least one thin-film element in the transpinnor exhibiting giant magnetoresistance, the transpinnor further comprising a conductor magnetically coupled to the at least one thin-film element for controlling operation of the transpinnor, wherein the transpinnor is operable to generate an output signal which is a function of a resistive imbalance among the thin-film elements and which is substantially proportional to a power current in the network of thin-film elements.-- This appears correctly in the Amendment After Allowance, Before Payment of Issue Fee as filed on August 5, 2005, page 14, paragraph 2 as claim 59.

--64. The plasma display device of claim 63 wherein first ones of the transpinnors are configured as drivers, and second ones of the transpinnors are configured as logic gates which are operable as selection logic.-- This appears correctly in the Amendment After Allowance, Before Payment of Issue Fee as filed on August 5, 2005, page 14, paragraph 3 as claim 60.

NOV 1 2007
OCT 1 2007

Patentee hereby requests expedited issuance of the Certificate of Correction because the error lies with the Office and because the error is clearly disclosed in the records of the Office. As required for expedited issuance, enclosed is documentation that unequivocally supports the patentee's assertion without needing reference to the patent file wrapper.

It is noted that the above-identified errors were printing errors that apparently occurred during the printing process. Accordingly, it is believed that no fees are due in connection with the filing of this Request for Certificate of Correction. However, if it is determined that any fees are due, the Commissioner is hereby authorized to charge such fees to Deposit Account 500388 (Order No. IMECP019).

Respectfully submitted,
BEYER WEAVER LLP

A handwritten signature in black ink, appearing to read "Joseph M. Villeneuve", with a long horizontal flourish extending to the right.

Joseph M. Villeneuve
Registration No. 37,460

P.O. Box 70250
Oakland, CA 94612-0250
510-663-1100

1001 - 2007